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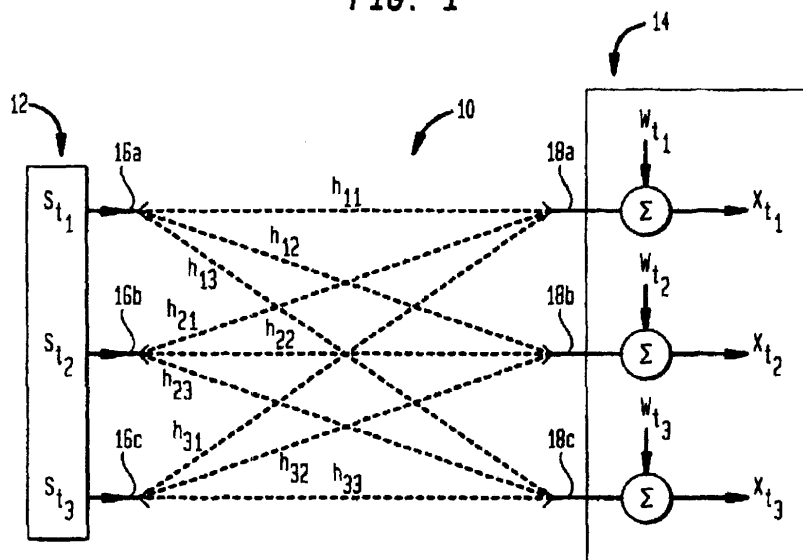
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(54) Multiple antenna communication system and method thereof

(57) A communications system achieves high bit rates over an actual communications channel between M transmitter antennas (16a-16c) of a first unit (12) and N receiver antennas (18a-18c) of a second unit (14), where M or N>1, by creating virtual sub-channels from the actual communications channel. The multiple antenna system creates the virtual sub-channels from the actual communications channel by using propagation in-

formation characterizing the actual communications channel at the first and second units. For transmissions from the first unit (12) to the second unit (14), the first unit sends a virtual transmitted signal over at least a subset of the virtual sub-channels using at least a portion of the propagation information. The second unit retrieves a corresponding virtual received signal from the same set of virtual sub-channels using at least another portion of said propagation information.

FIG. 1





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EUROPEAN SEARCH REPORT

Application Number
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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
A	US 3 646 443 A (ROWLAND HOWARD J ET AL) 29 February 1972 * column 1, line 6 - line 35; figure 1 * * column 2, line 20 - line 73 *	1-14	H04B7/04 H04B17/00
A	EP 0 773 638 A (AT & T CORP) 14 May 1997 * abstract; figures 2,6 *	10-12,14	
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			H04B H04Q
The present search report has been drawn up for all claims			
Place of search MUNICH		Date of completion of the search 9 June 1999	Examiner Felsen, J
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 98 30 7449

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82